UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,162	04/20/2001	Jeffrey Richard Conrad	10006663-019	9023

7590 03/21/2005	EXAMINER	
HEWLETT-PACKARD COMPANY	LIN, WEN TAI	
Intellectual Property Administration		
P.O. Box 272400	ART UNIT	PAPER NUMBER
Fort Collins, CO 80527-2400	2154	

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-7 and 10-19 are presented for examination.

2.   The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 103

3.   Claims 1-7 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahearn et al. (hereafter "Ahearn")[U.S. Pat. No. 5926463].

4.   Ahearn was cited in the previous office action.

5.   As to claims 1-2, Ahearn teaches the invention substantially as claimed including: a method of discovering nodes in a network in real time [Abstract; Figs. 9 and 12] comprising:

        seeding a discovery process using at least one of querying a user to provide a first node information and searching a database of nodes previously discovered by the network manager to identify the first node [e.g., Fig.5, wherein the spanning tree discovery starts with a user supplied node];

transmitting a signal from a network manager to a first node of the network by querying a user to provide the first node information, wherein the signal requests information regarding additional nodes known to the first node;

receiving a response that identifies the additional nodes known to the first node;

repeating the transmitting and receiving steps for each additional node identified; and

storing a list containing addresses of all identified nodes.

[See, e.g., col.1, line 59 – col.2, line 3; col.15, lines 23 – 64; and Fig.2C]

Ahearn does not specifically teach that the method applies to Cisco Discovery Protocol (CDP) nodes.

However, Ahearn teaches that the method uses SNMP queries to discover a multi-cast tree [Ahearn: col.15, lines 40-54].

It is obvious that Ahearn's method is also applicable to CDP nodes because the latter also support SNMP (i.e., able to send and receive SNMP messages) [see Applicant's specification regarding the definition of CDP].

6.   As to claims 3-7, Ahearn does not specifically teach imposing limits on a depth and/or breadth search for additional nodes by establishing a maximum hop limit or a recursion depth limit.

However, Ahearn teaches including a maximum hop count field in a trace query to limit the number of hops traced before a response is returned [col.14, lines 32-37]

and that a user is free to create a hierarchy of limitless depth (i.e., of any specified

depth) to suit his/her needs, if such a representation is desirable [col.23, lines 9-26]. In

light of this teaching, it is obvious that Ahearn's method could also impose limitations on

the size of the multicast tree (i.e., in depth and breadth), because this is a practical

approach in dealing with a large network, wherein unrelated, distant nodes can be

excluded from the discovery process.

7.   As to claim 10, Ahearn teaches that the method further comprising: performing

the discovery process based upon a user's request or at fixed time intervals [see, e.g.,

Figs. 2A and 2B wherein a timeout parameter is set to limit the response time].

8.   As to claims 11-12, Ahearn teaches that the method further comprising:

displaying the identified nodes in a Graphical User Interface; and

 modifying the list in real time to facilitate real time display of identified nodes as each

node is identified, wherein the real time display is presented as a graphical topology of

the network on a Graphical User Interface [col.21, line 64 – col.22, line 11; Figs. 1, 3-4,

8 and 12-13].

9.   As to claim 13, Ahearn does not specifically teach that the network manager is

Network Node Manager, which is a network management tool from Hewlett-Packard.

        However, it is well known in the art that a variety of network management tools

are available for initiating the discovery of network configuration, monitoring, and

graphically displaying the collected information. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the Network Node Manage may optionally be adopted as a network manager in Ahearn's system because it is a proven network management tool and employing an existing tool could save one from developing a new network manager.

10.   As to claim 14, Ahearn further teaches that the list further comprises at least one of information on the interrelation of the identified nodes, device identification information, and device type information [col.8, line 51 – col.9, line 24; note further that the device related information is stored in a MIB, which is accessible via SNMP].

11.   As to claims 15-19, since the features of these claims can also be found in claims 1-7 and 10-14, they are rejected for the same reasons set forth in the rejection of claims 1-7 and 10-14 above.

12.   Applicant's arguments filed on 11/16/2004 for claims 1-7 and 10-19 have been fully considered but they are not deemed to be persuasive.

13.   In the remarks Applicant argues that Ahearn does not teach "*seeding a discovery process using at least one of querying a user to provide a first node information and searching a database of nodes previously discovered by the network manager to identify the first node.*"

14.   The examiner respectfully disagrees. Specifically, Ahearn teaches a spanning

tree discovery algorithm which starts with a user supplied node [see, e.g., Fig.5 and its

relevant passage at col.17, line 60 – col.18, line 64]. As such, it is clear that the user-

supplied node could be obtained by querying the user (from the network manager).

15.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

16.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:
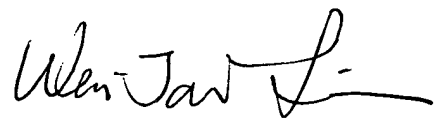
(703)872-9306 for official communications; and

(571)273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

March 18, 2005